REMARKS

Applicants respectfully request reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow.

Status of Claims:

No claims are currently being cancelled.

Claims 20-22 and 30-32 are currently being amended.

No claims are currently being added.

This amendment and reply amends claims in this application. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claims remain under examination in the application, is presented, with an appropriate defined status identifier.

After amending the claims as set forth above, claims 20-22 and 30-32 are now pending in this application, whereby claims 23-29 and 33-38 are withdrawn from consideration.

35 U.S.C. § 112, 2nd Paragraph Rejection of Claim 21

In the Office Action, claim 21 was rejected under 35 U.S.C. § 112, 2nd paragraph, as being indefinite, because there was insufficient antecedent basis for the term "the OSI layer" in that claim. By way of this amendment and reply, claim 21 (and the other claims) has been amended to overcome this rejection.

Claim Rejections – Prior Art:

In the Office Action, claims 20, 21, 30 and 31 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,502,131 to Vaid et al. in view of U.S. Patent No. 6,594,228 to Naidoo et al.; and claims 22 and 32 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Vaid et al. in view of Naidoo et al. and further in view of U.S. Patent No. 6,591,368 to Ryu. These rejections are traversed with respect to presently pending claims 20-22 and 30-32, for at least the reasons given below.

First, the Office Action asserts that the claimed feature corresponding to "information is transmitted in a frame of the OSI layer 2" is disclosed in Naidoo et al., and that the invention recited in claims 20, 21, 30 and 31 of the present application is obvious since the technical idea that "a maintenance signal and alarm information are transmitted in a frame of the OSI", and the technical idea that "a maintenance signal and alarm information are

transmitted in a frame of the OSI layer 2" could be obtained by combining the disclosure of Vaid et al. with that of Naidoo et al. Applicants respectfully disagree.

According to column 2, lines 19 to column 3, line 3 (and Figures 1-3) of Naidoo, two Layer 2 ports on the PSA (Proxy Signaling agent) side and two Layer 2 ports on the ATM switch side are provided, a data link (the "Primary Link") is established by coupling one Layer 2 port on the PSA side and the ATM switch side, while a backup data link (the "Primary Backup Link") is established by coupling the other Layer 2 port on the PSA side and the ATM switch side. During normal operation of the signaling link, the data link (Primary Link) is maintained in an active state in which signaling messages are transferred between the Layer 3 ports on the PSA side and the ATM switch side over the data link (Primary Link), and the backup data link (Primary Backup Link) is maintained in the standby state. Upon abnormal operation of the data link (Primary Link), the data link (Primary Link) is switched into an inactive state to prevent further transfer of signaling messages, and the backup data link (Primary Backup Link) is switched into an active state in which signaling messages are transferred between the Layer 3 ports on the PSA side and the ATM switch side over the backup data link (Primary Backup Link). However, since the OSI layer 3 or above is utilized, it is clear that this operation as described in Naidoo is much different from the presently claimed invention, and moreover, there is no disclosure in Naidoo as to determining whether the data link is abnormal or not using a frame of the OSI layer 2.

The LAN connecting device as recited in claims 20, 21, 30 and 31 performs only communication signal processing from a layer 1 to a layer 2 of the OSI layer; that is, the LAN connecting device which can perform only communication signal processing of layer 2 or less is not taught or suggested by Naidoo or by Vaid.

The invention according to claims 20 and 30 is directed to a LAN connecting device that performs only communication processing from a layer 1 to a layer 2 of the OSI layer, and the LAN connecting device has its maintenance data instructing maintenance test processing to the other LAN connecting device (its opposite party LAN connecting device) constructed by a signal of the layer 2 of the OSI layer, and transfers the maintenance data by an optical signal of a second input/output wavelength of the layer 2 of the OSI layer. Such features are not taught or suggested by the combined teachings of Vaid and Naidoo.

The invention according to claims 21 and 31 is directed to a LAN connecting device that performs only communication processing from a layer 1 to a layer 2 of the OSI layer, whereby this LAN connecting device constructs alarm information obtained in failure monitoring processing in an intermittent pattern of the signal of the layer 2 of the OSI layer and transfers this alarm information by an optical signal of a second input/output wavelength to said other LAN connecting device (its opposite party LAN connecting device). Such features are not taught or suggested by the combined teachings of Vaid and Naidoo.

Therefore, presently pending claims 20, 21, 30 and 31 are patentable over the combined teachings of Vaid et al. and Naidoo et al.

With respect to the rejection of claims 22 and 32 based in part on the teachings of Ryu, that reference discloses that when one of LAN connecting devices is powered off, a signal indicating the power off is notified to the other LAN connecting device by state communicating means.

On the contrary, the LAN connecting device described in claims 22 and 32 of the present application is based on "performing only communication signal processing from a layer 1 to a layer 2 of the OSI layer", that is, the LAN connecting device which can perform only communication signal processing of layer 2 or less, and such a precondition of the present invention is not taught or suggested by Vaid, Naidoo or by Ryu.

The invention according to claims 22 and 32 is directed to a LAN connecting device which performs only communication processing from a layer 1 to a layer 2 of the OSI layer, whereby this LAN connecting device has its power-off information obtained by the power state monitoring processing constructed by an intermittent pattern of a signal of the layer 2 of the OSI layer, and transfers this power-off information by an optical signal of a second input/output wavelength to said other LAN connecting device (its opposite party LAN connecting device). Such features are not taught or suggested by the combined teachings of Vaid, Naidoo and Ryu.

Furthermore, Ryu does not teach or suggest the claim features in which the maintenance signal and the alarm information are transmitted by the layer 2 of the OSI layer. Accordingly, it is believed that the features of claims 22 and 32 cannot be obtained over the combination of Vaid, Naidoo and Ryu.

Conclusion:

Since all of the issues raised in the Office Action have been addressed in this Amendment and Reply, Applicants believe that the present application is now in condition for allowance, and an early indication of allowance is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicants hereby petition for such extension under 37 C.F.R. §1.136 and authorize payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

Date August 10, 2006 By Phillip J. Articola

FOLEY & LARDNER LLP
Washington Harbour
3000 K Street, N.W., Suite 500
Washington, D.C. 20007-5143
Telephone: (202) 672-5414
Facsimile: (202) 672-5399

Richard L. Schwaab
Registration No. 25,479

Phillip J. Articola
Registration No. 38,819